

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (Cancelled)
2. (Cancelled)
3. (Cancelled)
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23. (Cancelled)
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26. (Cancelled)
27. (Cancelled)

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- 30. (Cancelled)
- 31. (Cancelled)
- 32. (Cancelled)
- 33. (Cancelled)
- 34. (Cancelled)
- 35. (Cancelled)
- 36. (Cancelled)
- 37. (Cancelled)
- 38. (Cancelled)
- 39. (Cancelled)
- 40. (Cancelled)
- 41. (Cancelled)
- 42. (Cancelled)
- 43. (Cancelled)

44. (Currently amended) A method for creating a query search condition through a user interface, the method comprising:

displaying column names that are selectable for use in a predicate of the query search condition in a first display area of the user interface;

displaying column operators that are selectable for use in the predicate of the query search condition in a second display area of the user interface;

receiving selection of one of the column names displayed in the first display area of the user interface;

receiving selection of one of the column operators displayed in the second display area of the user interface;

automatically generating a list of all column values that are selectable for use in the predicate of the query search condition based on the selected column name and the selected column operator; ~~and~~

displaying the list of all column values that are selectable for use in the predicate of the query search condition in a third display area of the user interface[.];

the first display area, the second display area, and the third display area being displayable together in the user interface;

receiving selection of at least two predicates in the query search condition; and

grouping the selected predicates based on a user selection of a displayed grouping control, the grouping controlling the order in which the first and second predicates are evaluated with respect to at least one unselected predicate of the query search condition.

45. (Previously presented) The method of claim 44, further comprising:

receiving selection of one or more of the column values displayed in the third display area of the user interface.

46. (Previously presented) The method of claim 45, further comprising:

confirming selection of the selected column name, the selected column operator, and the one or more selected column values.

47. (Previously presented) The method of claim 46, wherein confirming selection of the selected column name, the selected column operator, and the one or more selected column values comprises:

receiving user input clicking a mouse on a button in the user interface.

48. (Currently amended) The method of claim 45, further comprising:

~~displaying~~ forming the predicate of the query search condition ~~in a fourth display area of the user interface~~ based on the selected column name, the selected column operator, and the one or more selected column values;

adding the predicate to the query search condition; and

displaying query search condition and the predicate in a fourth display area of the user interface as one of a plurality of displayed predicates of the query search condition, the selection of at least two predicates being from the displayed query search condition,

the first display area, the second display area, the third display area, and the fourth display area being displayable together in the user interface.

49. (Previously presented) The method of claim 48, further comprising:

updating a query model with the predicate of the query search condition; and,

displaying SQL code of the query model in a fifth display area of the user interface,

the first display area, the second display area, the third display area, the fourth display area, and the fifth display area being displayable together in the user interface.

50. (Previously presented) The method of claim 44, wherein displaying column names that are selectable for use in the predicate of the query search condition comprises:

displaying the column names that are selectable for use in the predicate of the query search condition in a first pull-down menu.

51. (Previously presented) The method of claim 44, wherein displaying column operators that are selectable for use in the predicate of the query search condition comprises:

displaying the column operators that are selectable for use in the predicate of the query search condition in a second pull-down menu.

52. (Previously presented) The method of claim 44, wherein displaying the list of all column values that are selectable for use in the predicate of the query search condition comprises:

displaying the list of all column values that are selectable for use in the predicate of the query search condition in a third pull-down menu.

53. (Previously presented) The method of claim 44, wherein displaying the list of all column values that are selectable for use in the predicate of the query search condition comprises:

displaying the list of all column values that are selectable for use in the predicate of the query search condition in a plurality of pull-down menus.

54. (New) The method of claim 44, further comprising displaying the query search condition in a fourth display area of the user interface, the query search condition including a plurality of displayed predicates, at least one of the predicates based on the selections of the column names and the column operators, the selection of at least two predicates being from the displayed query search condition,

the first display area, the second display area, the third display area, and the fourth display area being displayable together in the user interface.

55. (New) The method of claim 48 wherein adding the predicate to the query search condition is in response to a selection from the user to add the predicate.

56. (New) The method of claim 44, further comprising:

forming a query statement based on, at least in part, the query search condition and selections in the user interface; and

processing the query statement into a form defined by a query model, the processing including:

using a plurality of content viewers to interface to an application that uses the user interface and to process the query statement into query information independent of a specific structure, including:

using a particular one of a plurality of API-specific content viewers to interface with a particular GUI API used by the application, each API-specific content viewer

usable with an associated one of a plurality of different available graphical user interface (GUI) APIs; and

using a non-specific content viewer in communication with the API-specific content viewers to provide the query information; and

using a model content provider to receive the query information and translate the query information into the form defined by the query model, the form including item provider objects that are instances of query model elements of the query model and that include query model relationships of the query model.

57. (New) The method of claim 56, wherein each of the API-specific content viewers processes item provider objects provided by the model content provider for structures specific to the associated GUI API.

58. (New) The method of claim 56 wherein processing the query statement into the form in accordance with the query model includes:

selecting a query element of the query statement for modeling from a plurality of query elements in the query statement;

identifying at least one type associated with the selected query element;

defining a parent node representing the selected query element;

defining a child node for the parent node for each of the identified at least one types; and

examining each of the child nodes to determine one or more subtypes of the child nodes;

defining a subtype child node of each child node for each of the determined subtypes; and

using the defined parent node, child node, and subtype child nodes to create a tree structure representative of the selected query element.

59. (New) The method of claim 56 wherein using the model content provider to receive the query information and translate the query information into the form defined by the query model further comprises:

adding at least one proxy item provider object to the form to replace at least one reference to at least one other form defined by the query model, and

reestablishing the at least one reference to the form defined by the query model after code is generated from the form.

60. (New) The method of claim 56 wherein the translating of the query information into the form defined by the query model includes:

creating the item provider objects dynamically as the query statement is formed.